



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,024	12/20/2005	Mitsuru Sekiya	44471/324299	1311
23370	7590	05/08/2007	EXAMINER	
JOHN S. PRATT, ESQ			AURORA, REENA	
KILPATRICK STOCKTON, LLP			ART UNIT	PAPER NUMBER
1100 PEACHTREE STREET			2862	
ATLANTA, GA 30309				
MAIL DATE		DELIVERY MODE		
05/08/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

RH

Office Action Summary	Application No.	Applicant(s)	
	10/595,024	SEKIYA, MITSURU	
	Examiner	Art Unit	
	Reena Aurora	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 February 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1 - 18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/26/07, 12/20/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to amendment received on 02/05/07.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Welsch et al. (2003/0137293).

As to claim 1, Welsch et al. (hereinafter Welsch) discloses a position sensor comprising a slider (6, fig. 1) having a magnet; a stator (3,4) consisting of a magnetic body having an area in which the slider (6) enters while keeping a predetermined clearance; a magnetically-sensitive sensor (5) provided in the stator (3,4) to detect a position of the slider (6) corresponding to a percentage of the magnet entering the area; and a magnetic flux leakproof member (2) for preventing magnetic flux, which is generated in a part of the magnet that does not enter the area, from leaking out to the stator (3,4).

As to claims 2 – 3, Welsch discloses a position sensor comprising a slider (12) having a magnet (3) having its front (N) and back (S) faces whose polarities are different from each other; a stator (4) consisting of a magnetic body having a pair of

Art Unit: 2862

opposed walls (4, 13) forming an area allowing the slider (12) to move while keeping a predetermined clearance, the opposed walls (4, 13) corresponding to the front and back faces of the magnet (3); a magnetically-sensitive sensor (7) provided in the stator (4) to detect a position of the slider (12) corresponding to a percentage of the magnet (3) entering the area; and a magnetic flux leakproof member (5) for preventing magnetic flux, which is generated in a part of the magnet (3) that does not enter the area, from leaking out to the stator (4).

As to claims 4 – 6, Welsch discloses a position sensor comprising a slider (6) having a magnet having its front and back faces whose polarities are different from each other; a main stator (3,4) consisting of a magnetic body having a pair of opposed walls forming an area in which the slider (6) enters while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet, and a first gap continuing into the opposed walls; a magnetically-sensitive sensor (5) arranged in the first gap to detect a position of the slider (6) corresponding to a percentage of the magnet entering the area; and an assist stator (2) for preventing magnetic flux, which is generated in a part of the magnet that does not enter the area, from leaking out to the main stator (3,4).

As to claims 7 - 9, Welsch discloses a position sensor comprising a slider (6) having a magnet having its front and back faces whose polarities are different from each other; a main stator (3,4) consisting of a magnetic body having a pair of opposed walls forming a first area in which the slider (6) moves while keeping a predetermined

clearance, the opposed walls to the front and back faces of the magnet (3), and a first gap continuing into the opposed walls; an assist stator (2) arranged at a second gap intersecting with a moving direction of the slider (6) from the main stator (3,4), the assist stator (2) consisting of a magnetic body having a pair of opposed walls forming a second area allowing the slider (12) to move while keeping a predetermined clearance; and a magnetically-sensitive sensor (7) arranged in the gap of the main stator (4) to detect a position of the slider (12) corresponding to a percentage of the magnet (3) entering the first area of the main stator (4).

As to claim 10, Welsch discloses a position sensor comprising a slider (6) having a magnet having its front and back faces whose polarities are different from each other; a main stator (3, 4) consisting of a magnetic body having a pair of opposed walls forming a first area in which the slider enters keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet, and a pad-of transverse walls formed to extend from the opposed walls and arranged close to each other through a uniform gap along a moving direction of the slider; an assist stator (2) arranged at a gap intersecting with the moving direction of the slider from the main stator (3,4), the assist stator (2) consisting of a magnetic body having a pair of opposed walls forming a second area allowing the slider (6) to move while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet; and a magnetically-sensitive sensor (5) arranged in an optional position in the uniform gap of the main stator (3, 4) to detect a position of the slider (6) corresponding to a percentage of the magnet entering the first area of the main stator.

As to claim 11, Welsch discloses a position sensor comprising a slider (6) having a magnet having its front and back faces whose polarities are different from each other a main stator (3,4) consisting of a magnetic body having a pair of opposed walls forming a first area in which the slider (6) enters while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet, and a transverse arm formed to extend from one of the opposed walls and arranged close to the other of the opposed walls through a uniform gap along a moving direction of the slider; an assist stator (2) arranged at a gap intersecting with the moving direction of the slider from the main stator (3,4), the assist stator (2) consisting of a magnetic body having a pair of opposed walls-forming a second area allowing the slider (6) to move while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet; and a magnetically-sensitive sensor (5) arranged in an optional position in the uniform gap of the main stator (3,4) to detect a position of the slider corresponding to a percentage of the magnet entering the first area of the main stator.

As to claims 12 – 16, Welsch discloses a position sensor comprising a slider (6) having a magnet having its front and back faces whose polarities are different from each other; a main stator (3, 4) consisting of a magnetic body having a pair of opposed walls forming a first area in which the slider (6) enters while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet, a first arm formed to extend from one of the opposed walls and arranged close to the other of the opposed walls through a uniform gap along a moving direction of the slider

Art Unit: 2862

and a second arm formed to extend from the other of the opposed walls and arranged close to the one of the opposed walls through a uniform gap along a moving direction of the slider; an assist stator (2) arranged at a intersecting with the moving direction of the slider (6) from the main stator (3, 4), the assist stator (2) consisting of a magnetic body having a pair of opposed walls forming a second area allowing the slider to move while keeping a predetermined clearance, the opposed walls corresponding to the front and back faces of the magnet; and a magnetically-sensitive sensor (5) arranged in an optional position in the gap between the first arm and the other of the opposed walls to detect a position of the slider (6) corresponding to a percentage of the magnet entering the first area of the main stator (3, 4).

As to claims 17 and 18, Welsch discloses a position sensor comprising a slider (6) consisting of a pair of magnets whose side edges along a moving direction of the slider are joined to each other and each of which has front and back faces whose polarities are different from each other and an armature provided on one side face of the pair of magnets; a main stator (3,4) consisting of a magnetic body arranged in a position opposing the other side face of the pair of magnets; a magnetically-sensitive sensor (5) provided in the main stator (3,4) to detect a position of the slider (6) corresponding to a percentage of the magnets entering an area where the slider (6) opposes the main stator (4); and an assist stator (2) consisting of a magnetic body for preventing magnetic flux, which is generated in parts of the magnets that do not enter the area, from leaking out to the main stator (3,4).

Art Unit: 2862

Response to Arguments

Applicant's arguments with respect to claims 1 - 18 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

Art Unit: 2862

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Reena Aurora


REENA AURORA
PRIMARY EXAMINER
TECHNOLOGY CENTER 2800